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EXAMINER	
HIRSHFELD, A	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 38

Application Number: 09/836,369
Filing Date: October 20, 1997
Appellant(s): VOLKER SCHMIDT et al.

Charles E. Krueger
For Appellant

EXAMINER'S ANSWER

This is in response to appellant's brief on appeal filed February 13, 2001.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct. However, since the issue for which patentability of the claims is dependent is similarly applicable to the rejection of the claims using Hollander et al. alone as it is to the rejection of the claims using the combination of German patent document 32 13 955 and British patent document 2 203 537, the examiner has removed the rejection of claims 1,3 and 82 under 35 U.S.C. 103(a) as being unpatentable over German patent document 32 13 955 in

view of British patent document 2 203 537. Therefore, the sole issue remaining is whether the rejection of claims 1,3 and 82 under 35 U.S.C. 103(a) as being unpatentable over Hollander et al. is proper.

(7) Grouping of Claims

The rejection of claims 1,3 and 82 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

5,368,392	HOLLANDER et al.	11-1994

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1,3 and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hollander et al. (5,368,392).

Hollander et al. '392 teaches a device and method for outlining an energy zone on a surface whose temperature is to be measured. The device includes a pistol grip radiometer in combination with a laser aiming device. In the embodiment illustrated in figures 5 and 10, the laser device includes a means for simultaneously emitting a plurality of more than two laser beams towards the surface to outline the energy zone. In figure 10, the beams are divergent. As stated in col. 6, lines 49-51, individual lasers can be used or laser splitting devices can be used to split a single laser beam. The temperature measurement device can be positioned on the central axis of the plurality of laser beams, downstream of the beam splitter.

Hollander et al. '392 does not teach the sighting arrangement having a diffractive optical system (particularly that formed by a holographic element).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hollander et al. '392 by replacing the beam splitter thereof with a diffractive optical system, such as one formed by a holographic element, since such a diffractive optical system and the beam splitter of Hollander et al. '392 are equivalent and alternative devices for creating an image from a beam of light. One having

ordinary skill in the art at the time the invention was made would recognize that any conventional beam splitting device could suffice in the device of Hollander et al. '392.

Please note that the declaration of William Menchine, filed June 16, 1999, shows that diffraction gratings for generating a circle were known in the art prior to applicant's invention.

(11) Response to Argument

The sole issue in this appeal is whether the rejection of claims 1,3 and 82 under 35 U.S.C. 103(a) as being unpatentable over Hollander et al. is proper. In the following paragraphs, appellant's claim 1 will be compared to the Hollander et al. reference to show why the rejection of claims 1,3 and 82 is proper in view of this reference.

Paragraph "a" of Appellant's claim 1 is directed to "a detector for receiving heat radiation emanating from a measurement spot on an object of measurement". This feature is clearly taught by the Hollander et al. reference, and is labeled with numeral "316" in figure 5, for example. The purpose of this detector is for receiving heat radiation emanating from a measurement spot on an object of measurement, which is the same stated purpose as Appellant's detector. Therefore, paragraph "a"

teach the lasers illuminating a diffractive optical system to produce a diffraction pattern in the form of light intensity distribution. Since this is the only limitation in claim 1 which is not present in the Hollander et al. reference, the sole issue for appeal reduces to whether it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hollander et al. by replacing the laser sighting arrangement of Hollander et al. with a laser sighting arrangement that includes a diffractive optical system.

To determine the answer to the above question of obviousness, the Hollander et al. reference must be further analyzed to evaluate whether there is motivation to modify Hollander et al. as proposed by the examiner. This reference teaches the desirability of using laser beams to outline a measurement spot, but does not set forth criticality to the means for directing the beams in the desired arrangement. In fact, Hollander et al. teaches that many alternative laser beam directing means could be used with equally desirable results. For example, see Hollander et al. at col. 6, lines 49-51, where is stated that "individual lasers can be used or laser splitting devices can be used to split a single laser beam", and col. 3, lines 47 and 48, where it is stated that the splitting of the laser beams may be "accomplished by mirrors, optics, and fiber

optics". These sections of the Hollander et al. reference clearly teach one of ordinary skill in the art that the specific beam splitter chosen is not critical to the invention and that alternative beam splitting means could be used, if desired. Therefore, one having ordinary skill in the art would recognize that any known beam splitter that is capable of arranging beams to identify and outline a measurement spot would suffice and could be used. The choice of which beam splitter to use would depend upon the desires of the user/manufacturer, weighing such factors, for example, as monetary considerations and available resources.

The diffractive optical system of Appellant's claimed invention was not invented by Appellant, and such is not argued by Appellant. Rather, the claimed diffractive optical system is a known means for splitting a single beam into a desired pattern. Such was admitted by Appellant in the declaration of William Menchine, filed June 16, 1999, wherein it was stated that the diffractive optical system of the invention is a "commercially available circle generator beam splitter diffraction grating". Since Appellant's claimed sighting arrangement is a well known beam splitter, and since the Hollander et al. reference teaches that one of ordinary skill in the art would look to any alternative beam splitter, one having ordinary skill in the art

would be motivated to modify the Hollander et al. reference by replacing the beam splitters thereof with a diffractive optical system, as claimed by Appellant.

Appellant has argued that the examiner has used Appellant's teachings as a basis for finding obviousness. However, as pointed out above, the motivation for modifying the Hollander et al. reference arises from the teaching in Hollander et al. that the type of beam splitter is not critical to the invention, and the fact that the claimed diffractive beam splitter is merely one of many known alternative beam splitters that could be used. Although it is true that Hollander et al. does not specifically state that diffractive optical systems may be used, one having ordinary skill in the art would recognize that any known beam splitter (such as diffractive beam splitters) could be used in place of the examples shown in the figures of the Hollander et al. reference.

Appellant has also argued that the examiner has applied the "obvious to try" standard. Appellant's position is that if Hollander et al. is construed to suggest use of generic beam splitter, then Hollander et al. offers no suggestions as to which of many types of beam splitters would be well suited to the instant application. Appellant appears to be arguing that Hollander et al. must specifically set forth that a diffractive

beam splitter must be suited for the instant application in order to support the examiner's rejection of Appellant's claims. This conclusion is not proper, since it would place far too great a burden on an applicant to specifically list all alternative elements that could be used in his or her invention. Rather, when a specific element of an invention is deemed as not critical to the invention, and when a patent specification teaches that alternative elements could be used, we must look to one of ordinary skill in the art to determine what alternatives would be obvious. In the instant application, since Hollander et al. teaches that the type of beam splitter is not critical to the invention, and since Hollander et al. teaches that alternative beam splitters can be used, we must determine whether a diffractive beam splitter would be an obvious alternative to one having ordinary skill in the art. Since diffractive beam splitters are known in the art as being a conventional means for splitting a beam into a desired pattern, such as a circle capable of outlining a spot, these beam splitters should be considered an obvious alternative to the splitters of Hollander et al.

Appellant's final argument regarding Hollander et al. is that since Hollander et al. shows conduits for directing the separate laser beams to the measurement spot, the use of a diffractive optical system would not be obvious. Appellant

argues that since a diffractive optical system would not be easily integrated with an arrangement of separate conduits, the rejection as proposed by the examiner is not proper. However, whether or not a diffractive system may be integrated with conduits is not material to the question of whether the proposed rejection is proper. The conduits of Hollander et al. are not critical features of the invention. Rather, they are merely part of the chosen beam splitters used to direct the lasers to the measurement spot. The critical feature of Hollander et al. is the use of a laser sighting means that outlines a measurement spot. One having ordinary skill in the art would recognize that this critical feature could be accomplished with a conventional diffractive beam splitter, regardless of whether this splitter replaces the conduits of Hollander et al. or is used in conjunction with these conduits.

In conclusion, Appellant has used a conventional beam splitter in an environment where it is known in the art to use beam splitters. The purpose of Appellant's beam splitter is identical to the purpose of the beam splitters of the prior art in Hollander et al. Appellant has not argued or shown any unexpected results arising from use of the conventional diffractive beam splitter as claimed.

Accordingly, it is believed that the rejections should be sustained.

Respectfully submitted,

ANDREW H. HIRSHFELD
PRIMARY EXAMINER

AHH
March 6, 2001

An Appeal Conference was held on March 5, 2001, with the following participants:

Diego F.F. Gutierrez
Supervisory Patent Examiner, Conferee

Art Grimley
Supervisory Patent Examiner, Conferee

Andrew Hirshfeld
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